REMARKS/ARGUMENTS

1. Request for Continued Examination:

A Request for Continued Examination (RCE) is respectfully submitted as per 37 C.F.R. 1.114 as a full and timely response to the Advisory Action of February 12, 2007. Claims 1, 7, 10-11, and 18-19 have been amended and an argument made demonstrating distinction between the claimed invention and known references. A continued examination and consideration of all amendments are politely requested.

2. Background

In the Final Office action of December 8, 2006, claims 1-4, 7, 8, 10, 11, 13-15, and 17 were rejected under 35 U.S.C. 103(a) as being unpatentable over Watabe (US 2002/0018419) in view of Kenjo (5,029,155). Claims 9, 16, and 18-20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Watabe in view of Kenjo and further in view of Hsu et al. (US 2005/0025018). Claims 5, 6, and 12 were rejected under 35 U.S.C. 103(a) as being unpatentable over Watabe in view of Kenjo and further in view of Suzuki (US 6,744,031). Claim 21 was rejected under 35 U.S.C. 103(a) as being unpatentable over Watabe in view of Kenjo and further in view of Hsu and further in view of Suzuki.

The Examiner's statements on the Continuation Sheet (PTO-303) provided with the current Advisory Action are interpreted by the applicant as a continuation of the above-cited rejections.

3. Discussion

As best understood by the applicant, the Examiner believes the cited art teaches that current write strategy has considered the bandwidth of the front monitor IC and the speed of the optic disc. However, the cited art only refers to a phenomenon. In the cited art, when writing a mark or space of 11T (the longest), even if writing at 4X and the FMIC is operated

in a few Mhz, APC can be performed successfully, Therefore in the normal access process, power used in 11T can be sampled and nothing else has been taught for other lengths. In other words, the cited art has informed us that APC can be done when using a fixed data length of 11T.

On the other hand, the present application determines the length of data needed for APC according to the speed of the current optic disc and the bandwidth of the FMIC to perform APC for correcting power. Thus the present disclosure is not just describing a phenomenon, but a method for correcting power. Especially in high-speed generation, the current method has a great advantage.

With this in mind, the applicant has chosen to amend independent claims 1, 10, and 18 to include the limitation of "a predefined NRZI pattern having a run length selected according to a relationship between recording speed and a bandwidth of the photodiode". This limitation is supported at least by paragraph [0031] as filed and no new material has been introduced. Dependent claims 7, 11, and 19 also have been amended with the further limitation of "the selected run length is longer when the photodiode has a relatively slower response than when the photodiode has a relatively faster response", also supported at least by paragraph [0031].

The applicant asserts that even if, as suggested by the Examiner, that Watabe selects a predefined NRZI pattern according to recording speed and bandwidth of the photodiode (Continuation sheet), that there is no teaching in known prior art alone or in combination of selecting a run length according to the recording speed and photodiode bandwidth. It may be true that Watabe teaches utilizing a predefined NRZI pattern, a recording speed, and a photodiode bandwidth, and even "selects" the predefined NRZI pattern and it is logical to assume that the selected NRZI pattern has a specific run length, but there is no teaching of selecting the run length according to recording speed and photodiode bandwidth. The difference between the two concepts being that the present disclosure can properly perform APC during high-speed recording using an inexpensive photodiode merely by lengthening the run length of the NRZI pattern, while the reference cannot.

This is not a trivial difference. In fact, referring again to paragraph [0021] of Watabe which states: "Even when the speed of the disk rotation is set at the quadruple speed, the required bandwidth of the photodetector and amplifier in the light-receiving module is only several MHz.", Watabe is effectively teaching that at a speed higher than quadruple, the bandwidth of the photodiode would have to be increased to accurately perform APC. It is noted that Watabe in this paragraph is also talking about CD-Rs. Clearly this problem becomes more acute in high-speed recordings (like Blu-ray) and is the specific problem at which the present application is directed.

The present invention solves the photodiode bandwidth problem by adjusting the run length of data used during APC and is claimed as such. This solution is not taught or suggested in known references. Additionally, to prevent the necessary run length selected from becoming too long in very high-speed situations, the present disclosure couples a low pass filter between the photodiode and the sample and hold circuit to allow a more accurate signal sample to be obtained faster than is conventionally done and taught by the references. These two concepts, although maybe appearing simple, are novel and certainly useful in reducing costs associated with fast response photodiodes.

Therefore, for at least these reasons, the applicant respectfully requests reconsideration and allowance of claims 1-21.

Sincerely yours,

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Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 12 hours behind the Taiwan time, i.e. 9 AM in D.C. = 9 PM in Taiwan.)